

ABSTRACT OF THE DISCLOSURE

Link monitoring architectures and methods that provide high reliability supervisory signaling in optical communication systems are described. Supervisory signals are transmitted via a communications channel, e.g., using overmodulation of an optical data signal envelope, between terminal units and line units in optical communication systems. The line units can be organized in groups of fiber pairs which share pump lasers and control units for handling the supervisory signaling. According to one exemplary embodiment, a line unit assembly includes two fiber pairs which have four control units which redundantly perform operations based upon commands received from the terminal units.